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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/577,570	05/25/2000	Gunther Kolle	P19311	6334

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GREENBLUM & BERNSTEIN, P.L.C.
1950 ROLAND CLARKE PLACE
RESTON, VA 20191

EXAMINER

HALPERN, MARK

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 04/09/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/577,570

Applicant(s)

KOLLE, GUNTHER

Examiner

Mark Halpern

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

- 1) Acknowledgement is made of Response received 1/23/2003, Paper No. 12.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 2) Claims 6-8, 15-28, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the limitation "said at least one wear-resistant working surface" in lines 1-2, "working" should be deleted. Claim 6 recites the limitation "said base" in line 3, -body- should be added after "base". Claim 7 recites the limitation "said at least one wear-resistant material" in lines 1-2. Claim 15 recites the limitation "the leading front edge" in line 6, "edge" should be -surface-. Claim 23 recites the limitation "said leading front edge" in line 7, "edge" should be -surface-.

There is insufficient antecedent basis for the limitations in the claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3) Claims 1-2, 8, 15-16, 18, 21, are rejected under 35 U.S.C. 102(b) as being anticipated by Akio Sohma (3,304,056). Akio Sohma discloses a turbine blade having a leading front surface. The leading front surface has the back of an anti-wear stellite plate 1 soldered or attached by fusion to it. The stellite plate is made of a cobalt-tungsten-chromium alloy, and the plate is for erosion protection. The stellite plate may be made of other erosion resistant alloy metal. The stellite plate 1 represents the base body of the present invention. The plate surface that includes ridges 3 represents the wear resistant surface of the present invention (col. 1-3, and Figures 1-5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4) Claims 19, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akio Sohma.

Claim 19: Akio Sohma is applied as above for claim 18, Akio Sohma fails to disclose the wear resistant material comprising a non-rusting, alloyed high-grade steel. It would have been obvious, to one skilled in the art at the time the invention was made, that the anti-wear element of Akio Sohma include a non-rusting, alloyed high-grade

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steel, since Akio Sohma teaches of an anti-wear element made of a cobalt-tungsten-chromium alloy metal, or of similar wear resistant alloy material (col. 2, lines 32-49).

Claim 22: Akio Sohma is applied as above for claim 21, Akio Sohma discloses an anti-wear element having a curvature as shown in Figures 1-4, however Akio Sohma fails to disclose that said curvature is of a radius of maximum of approximately 2 mm. It would have been obvious, to one skilled in the art at the time the invention was made, that the anti-wear element of Akio Sohma include a variety of curvatures including of the radius claimed, since the blades of a turbine are not uniform in curvature but are progressively changing in shape in order to maximize the impact and thus energy produced from steam hitting against the turbine blades.

5) Claims 9-14, 20, are rejected under 35 U.S.C. 103(a) as being unpatentable over Akio Sohma in view of Stoffer (3,365,126).

Claim 9: Akio Sohma is applied as above for claim 1, Akio Sohma fails to disclose that the leading front surface of a blade is completely covered by an anti-wear element. Stoffer discloses a leading front surface of a rotor blade completely covered by an anti-wear element (col. 2, lines 53-68, col. 4, lines 4- 73, and Figures 4, 5). It would have been obvious, to one skilled in the art at the time the invention was made, to combine the teachings of Akio Sohma and Stoffer of completely covering the leading front surface of the blade with anti-wear element, because such a combination would extend the erosion protection and thus increase the life of the blade in the Akio Sohma design.

Claims 10-11: a portion of anti-wear element coupled to rotor blade protrudes past the leading front surface of the blade in a forward direction as shown in Figure 5 of Stoffer.

Claims 12-13: a face of anti-wear element is beveled at an angle of approximately 1 to 45 degrees from parallel to a rotational axis of rotor. The angle is increasing in a direction toward leading front surface. See Figure 5 of Stoffer.

Claims 14, 20: the leading front surface has conical ring segments. See Figures 4-5 of Stoffer.

6) Claims 3-5, 17, 23-28, are rejected under 35 U.S.C. 103(a) as being unpatentable over Mannes (5,509,536) in view of Akio Sohma.

Claims 3, 17, 23: Mannes discloses a paper fiber processing apparatus that includes a tank 1, a screen 3', and a rotor with at least one blade 7' rotatably coupled adjacent to said screen. Stock suspension is circulated in the tank. Mannes fails to disclose having the leading front surface of the rotor blade protected by a wear resistant element (col. 2, line 34 to col. 3, line 62, and Figures 1-5). Akio Sohma, as per above, discloses a rotor having at least one blade and having its leading front surface protected by a wear resistant element. It would have been obvious, to one skilled in the art at the time the invention was made, to combine the teachings of Mannes and Akio Sohma, because such a combination would provide wear protection of the rotor thus extend the life of the apparatus of Mannes.

Claims 24-26 are disclosed by Akio Sohma in item 4, above.

Claims 4-5, 27-28: the apparatus of Mannes is a pulper.

Allowable Subject Matter

7) Claims 6-7, would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The primary reason for indicating allowable subject matter is that the cited prior art does not show a rotor for a paper stock processing machine wherein a wear resistant surface comprising a layer of wear-resistant material is coupled to a base body.

Response to Amendment

8) Applicant's arguments filed 1/23/2003, have been fully considered but they are not persuasive.

In regard to claim 1, Applicant alleges that the cited prior art, Akio Sohma, does not disclose an anti-wear element comprising a base body and at least one wear-resistant surface. Applicant also alleges that the anti-wear element is not coupled to a leading front surface to be protected.

Examiner responds as follows. Akio Sohma discloses a turbine blade having a leading front surface. The leading front surface has the back of an anti-wear stellite plate soldered or attached by fusion to it. The plate is made of a cobalt-tungsten-chromium alloy, and the plate is for erosion protection.

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Applicant alleges that in reference to claim 9, rejected under 35 U.S.C. 103(a) as being unpatentable over Akio Sohma in view of Stoffer, the cited references are not combinable. Applicant alleges that neither documents teach the claimed limitation; Akio Sohma does not teach the invention as per above, and Stoffer is directed to reducing erosion due to rain, ice dust, etc. in blades of a high speed aircraft compressors.

Examiner responds that the references are not interpreted by themselves but in combination. Akio Sohma fails to disclose that the leading front surface of a blade is completely covered by an anti-wear element, however, Stoffer discloses a leading front surface of a rotor blade completely covered by an anti-wear element. Examiner maintains that it would have been obvious, to one skilled in the art at the time the invention was made, to combine the teachings of Akio Sohma and Stoffer of completely covering the leading front surface of the blade with anti-wear element, because such a combination would extend the erosion protection and thus increase the life of the blade in the Akio Sohma design. The claims are apparatus claims. Apparatus claims must be structurally distinguishable from the prior art. Manner of operating the device does not differentiate apparatus claims from the prior art.

Applicant alleges that in reference to claims 3-5, 17, 23-28, rejection under 35 U.S.C. 103(a) as being unpatentable over Mannes (5,509,536) in view of Akio Sohma, the cited references are not combinable. Applicant alleges that Mannes does not teach any undesired wear on the rotor blades.

Examiner responds that the references are not interpreted by themselves but in combination. Mannes fails to disclose having the leading front surface of the rotor blade protected by a wear resistant element, however, Akio Sohma discloses a rotor having at least one blade and having its leading front surface protected by a wear resistant element. Examiner maintains that it would have been obvious, to one skilled in the art at the time the invention was made, to combine the teachings of Mannes and Akio Sohma, because such a combination would provide wear protection of the rotor thus extend the life of the apparatus of Mannes. The claims are apparatus claims. Apparatus claims must be structurally distinguishable from the prior art. Manner of operating the device does not differentiate apparatus claims from the prior art.

Conclusion

9) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Halpern whose telephone number is 703-305-4522. The examiner can normally be reached on Mon-Fri, (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 703-308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7718 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

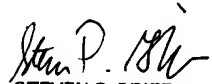
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Mark Halpern
Patent Examiner
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April 7, 2003

A handwritten signature in black ink, appearing to read "Steven P. Griffin".

STEVEN P. GRIFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700